

Remarks

In the final office action mailed May 4, 2006, claims 1, 2, 7 and 10 - 23 were rejected under 35 U.S.C. §102(a) over U.S. Published Patent Application No. 2003/0032204 (to Walt et al.); claim 3 was rejected under 35 U.S.C. §103(a) over Walt et al. in view of U.S. Patent No. 6,864,980 (to Te Kolste et al.); claims 4 - 6 were rejected under §103(a) over Walt et al.; and claim 8 was rejected under §103(a) over Walt et al. in view of U.S. Patent No. 6,266,476 (to Shie et al.); claim 9 was rejected under §103(a) over Walt et al. in view of U.S. Patent No. 5,877,009 (to Mandella et al.); and claim 24 was rejected under §103(a) over Walt et al. in view of U.S. Patent No. 5,512,745 (to Finer et al.).

The Walt et al. reference discloses an optical array device in which multiple channels (e.g., fibers) provide an array of sources that are used to interrogate a sample, for example for fluorescent moieties. The reference discloses that the particles may be manipulated by optical trapping through photoactivation of targeted cells by individually switching single channels on and off (Walt et al., ¶0030 and ¶0031) while a stage is moved relative to the array of fibers. The Walt et al. reference does not disclose that the illumination in each fiber is selectively positionable with respect to each associated focusing element, only that the stage moves relative the array of fibers, which may be switched on and off.

Each of independent claims 1, 11, 12, 18, 19 and 23 is amended herein to clearly state that movement of the illumination is with respect to the associated focusing element. Applicant submits that this clearly distinguishes the array of individually selectable fibers of Walt et al. that are disclosed to provide trapping by use of the movable stage

Claim 1 as amended states that a beamlet of electromagnetic energy is selectively directed via an associated focusing element toward a plurality of selectable focal locations with respect to the focusing element on the adjacent substrate. The system of Walt et al. provides no such selectable positioning with respect to each associated focusing element. Claim 1, therefore, is considered to be in condition for allowance. Each of claims 2 - 10 depends from claim 1 and further limits the subject matter thereof. Each of claims 1 - 10 is therefore in condition for allowance.

Claim 11 is also amended to require that a beamlet of electromagnetic energy is selectively directed via an associated focusing element toward a plurality of selectable focal locations with respect to the focusing element on the adjacent substrate. Claim 11, therefore, is considered to be in condition for allowance.

Claim 12 is amended to require that each focusing element is positioned to direct a focused beam toward a particle to be manipulated such that each directionally selective element is configured to be employed to move a focused beam with respect to an associated focusing element to thereby manipulate a particle. Claim 12, therefore, is considered to be in condition for allowance. Each of claims 13 - 17 depends from claim 12 and further limits the subject matter thereof. Each of claims 12 - 17 is therefore in condition for allowance.

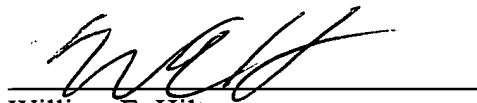
Claim 18 is amended to state that a beamlet of electromagnetic energy is selectively directed via an associated focusing element toward a plurality of selectable focal locations with respect to the focusing element on the adjacent substrate. Claim 18, therefore, is considered to be in condition for allowance.

Claim 19 is amended to further state that the step of selectively controlling each of the beamlets involves selectively directing a beamlet toward a plurality of selectable locations with respect to the associated focusing element on an adjacent substrate via an associated focusing element to manipulate the plurality of particles. Claim 19, therefore, is considered to be in condition for allowance. Each of claims 20 - 22 depends directly or indirectly from claim 19 and further limits the subject matter thereof. Each of claims 19 - 22 is therefore in condition for allowance.

Claim 23 is amended to further state that the step of selectively controlling each of the micromirrors involves selectively directing a beamlet toward a plurality of selectable locations with respect to an associated focusing element on an adjacent substrate via an associated focusing element to manipulate the plurality of particles. Claim 23, therefore, is considered to be in condition for allowance. Claim 24 depends from claim 23 and further limits the subject matter thereof. Each of claims 23 and 24 is therefore in condition for allowance.

Each of claims 1 - 24, therefore is in condition for allowance. Favorable action consistent with the above is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'W. E. Hilton', is written over a horizontal line.

William E. Hilton
Registration No. 35,192
Gauthier & Connors LLP
225 Franklin Street, Suite 2300
Boston, Massachusetts 02110
(617) 426-9180 Ext. 111